

# St. Croix Electric Cooperative

## Wiring Diagram for Current Transformer (CT) submetering of Off-peak Electric

Contact Information:  
If you have any questions or other off-peak  
metering options, please call  
Member Services at 715-796-7000

### LMR Schematic

R1 – Water Heater (240 VAC, 30A)  
Blue wires (N.C.)

R2 – Dual Fuel (120 VAC, 5A)  
• Electric Boiler : Orange } (N. O.)  
• Heat Pump Yellow } (N. C.)  
• Base board White/green }  
• A/C

R3 – Storage (120 VAC, 5A)  
• In-floor heat White / Blue } (N. O.)  
• ETS heaters Grey } (N. C.)  
• EV chargers Violet }

R4 – Warning  
• Brown / White – Relay driver

Load Control (L.C.) Power –  
• Red (N) } (120 V)  
• Black }  
White/Red } (240 V)

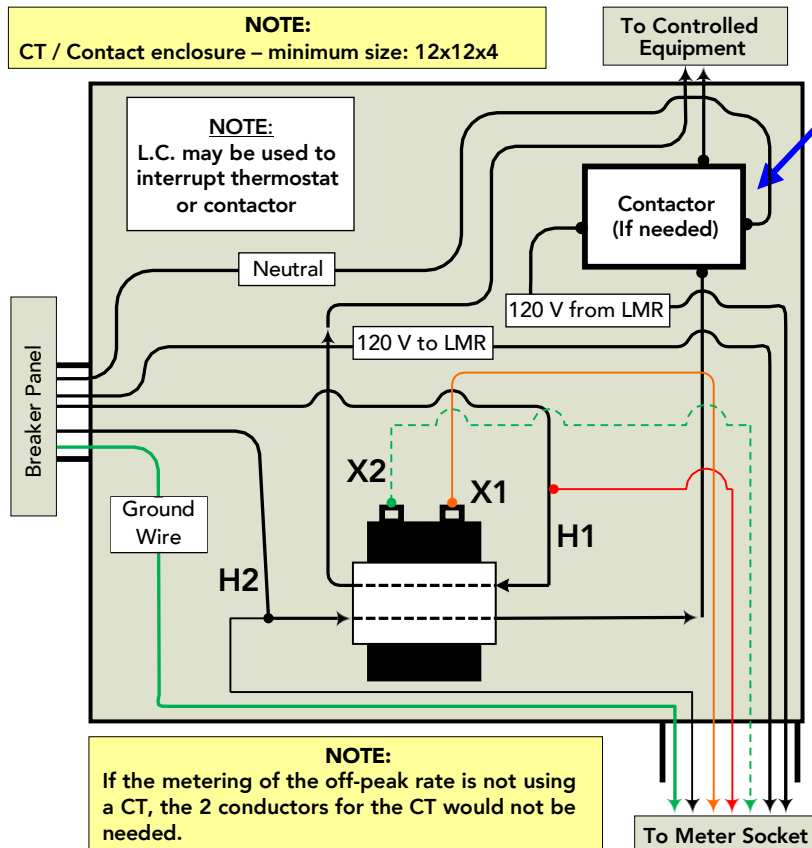
Current Transformer (CT) provided by SCEC

#### NOTE:

All wires of the same leg in the breaker panel must  
pass through the CT in the same direction.  
CT X2 must be grounded either in the meter socket  
or the CT enclosure but not at both ends.

#### NOTE:

CT / Contact enclosure – minimum size: 12x12x4

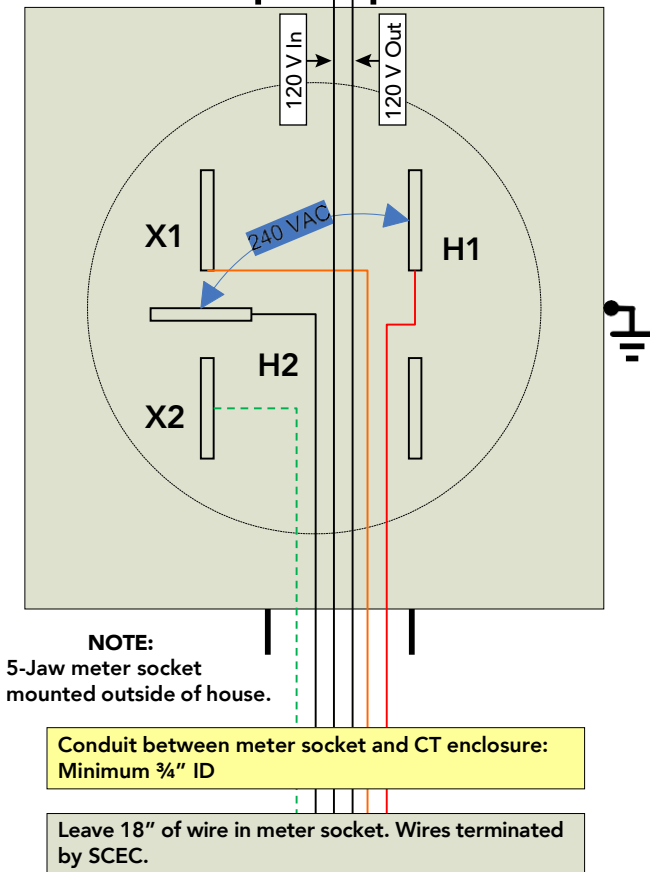


#### NOTE:

- No Contactor is needed for the Water Heater  
(use 30A relay in L.C.)
- Use contactors with 120 V Coils, normally  
open contacts

### Wire sizes & colors pulled/ran by Electrician from Members panel

- 2 – Blue #10 THHN (Water Heater)
- 2 – Yellow #12 THHN  
(Dual Fuel: Electric heat / A/C)
- 2 – Purple #12 THHN (Storage Heat / EV Charger)
- 2 – Brown #14 THHN (Alert) – [If needed]
- 1 – Black (H2) } (240 V) #12 THHN
- 1 – Red (H1) }
- 1 – Orange (X1) #12 THHN
- 1 – Green (X2) #12 THHN
- (NOTE: Check CT burden table to verify wire size)
- 1 – Green #12 THHN to ground  
meter socket

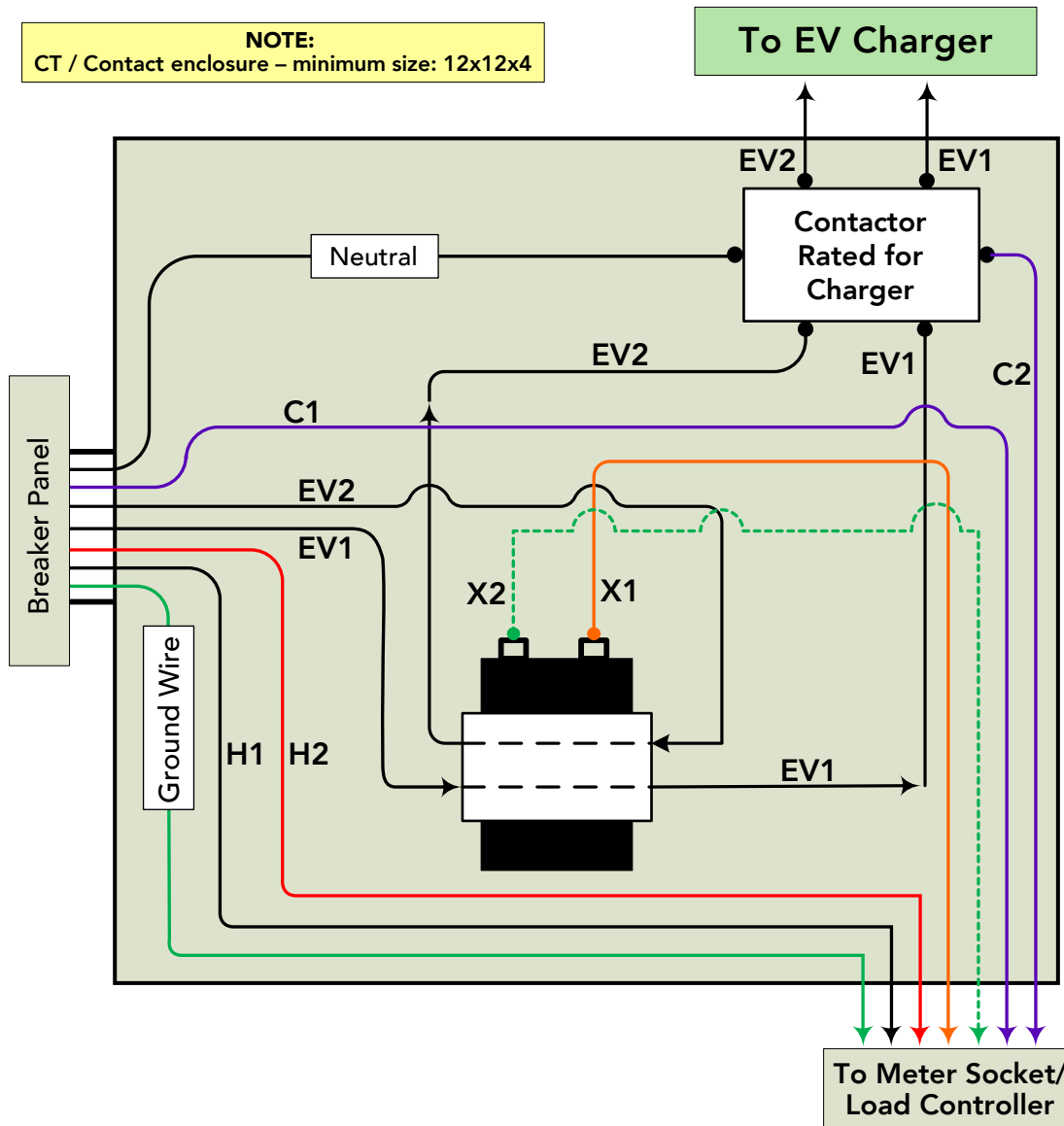


# St. Croix Electric Cooperative

Wiring Diagram for Current Transformer (CT)  
submetering of Off-peak Electric for EV Charger

## Contact Information:

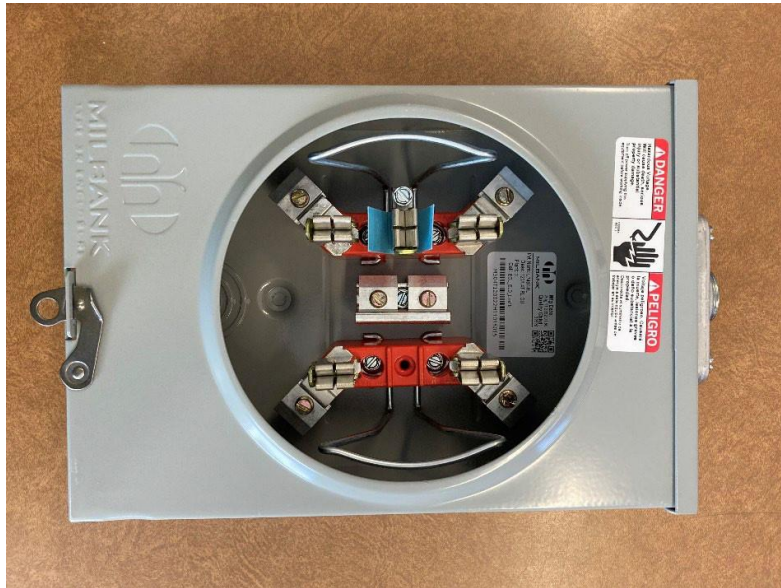
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## Wire sizes & colors pulled/ran by Electrician from Members panel

- 2 – EV1 Charger Branch Circuit
- EV2 Charger Branch Circuit
- 2 – Purple #12 THHN
  - C1: 120 volt coil power to load controller
  - C2: 120 volt coil power to coil from load controller
- 1 – Black (H1) } (240 V) #12 THHN
- 1 – Red (H2) } To meter/load controller
- 1 – Orange (X1) } #12 THHN } Current
- 1 – Green (X2) } #12 THHN } transformer wire
- 1 – Green #12 THHN – ground from breaker panel to meter socket

Leave 18" wire in meter socket.  
Wires terminated by SCEC.



**Off-peak (subtractive) Meter Socket**



**Current transformer – supplied by SCEC**



**Example of off-peak installation**

**NOTES:**

Meter socket needed = Mill bank MLB U748-RL or equivalent

1" Meter Hub = Millbank MLB A7514 or equivalent

1" to 3/4" reducing hub

5<sup>th</sup> terminal = MLB5TK2 or equivalent

Off-peak Meter Socket package available for purchase. See price list for current price.

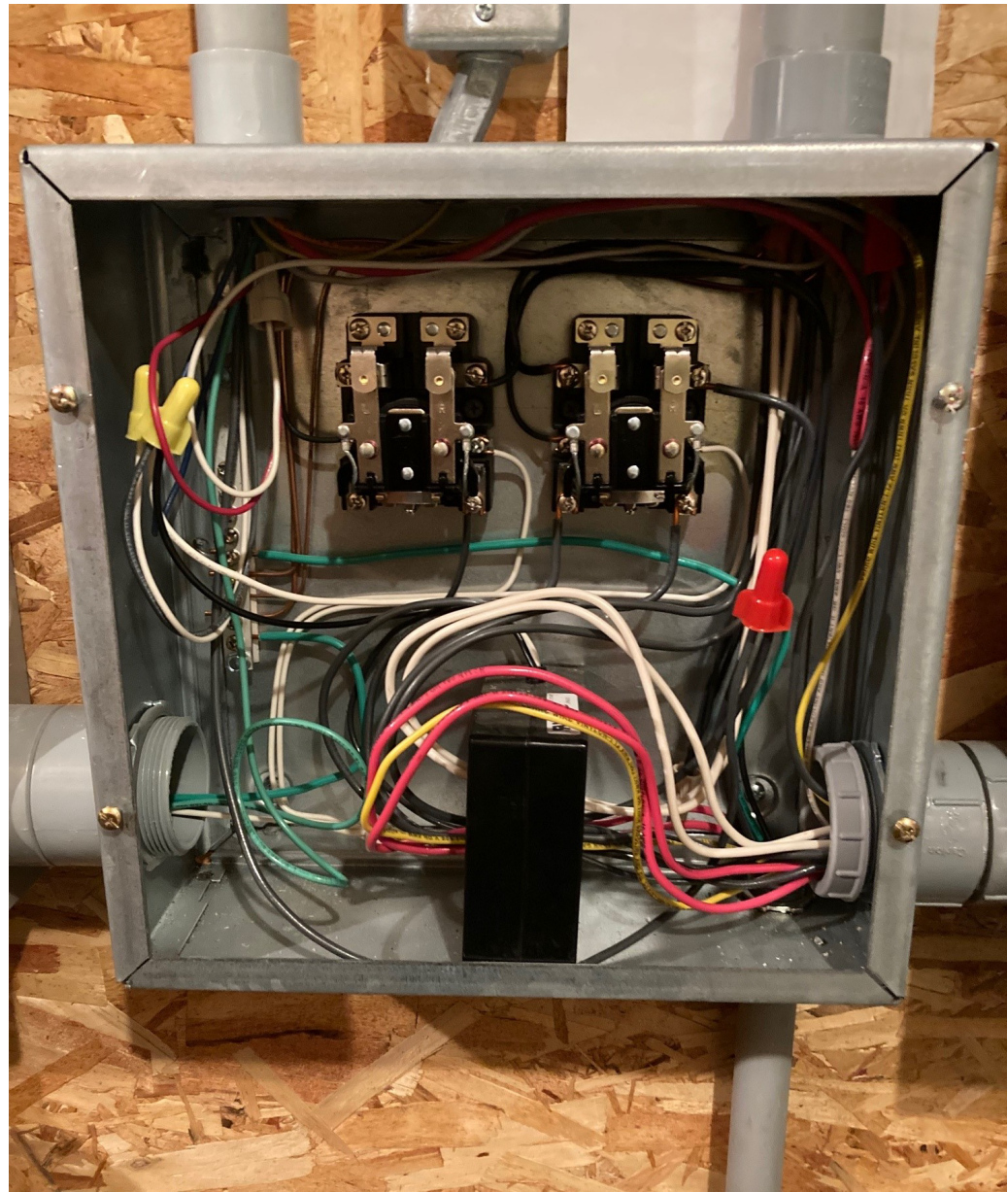
Current transformer provided by SCEC and can be picked up at SCEC headquarters.

**Contact Information:**

If you have questions, please call Member Services at 715-796-7000.



**12" x 12" Off-Peak Junction Box**



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